

ASA Bloomingburg, LLC

Air permit-to-install (PTI) number 01-01306

Public Hearing Date – April 18, 2006

Comment Period End Date – April 25, 2006

Summary of Comments and Ohio EPA Responses

August 2006

## **Introduction**

On March 2, 2006, Ohio Environmental Protection Agency (Ohio EPA) issued a draft air permit-to-install (PTI) to ASA Bloomingburg, LLC for construction of a new ethanol production facility in Bloomingburg, Ohio. On April 18, 2006, Ohio EPA conducted a public hearing to gather comments on the proposed air PTI. This response to comments is intended to address comments and questions presented at the hearing as well as those received in writing during the comment period. The comments have been paraphrased and/or excerpts have been provided for brevity. In cases where multiple comments were received on the same issue, the comment and response has been listed just once.

## Regulatory Overview

Ohio EPA has reviewed the air PTI application for ASA Bloomingburg, LLC in accordance with applicable state and federal regulations. All applicable rules have been included in the permit terms and conditions. The rules and Ohio EPA's policies are designed to be protective of human health and the environment. ASA Bloomingburg, LLC will be required to comply with the rules and regulations as set forth in the air PTI.

## **Comments**

### **Comment #1:**

Commentor said that 80 percent of the ethanol industry had been cited for environmental violations by the federal Environmental Protection Agency and those facilities are under enforcement actions at this time and hopes that this plant does not turn out that way.

### **Ohio EPA Response:**

When issuing air permits, Ohio EPA does not take into consideration whether other facilities are in violation or not. It is not a criteria that Ohio EPA would consider in issuing a final air permit-to-install.

If the company violates the limits and requirements of the issued final air permit-to-install, Ohio EPA will take appropriate steps to resolve the matter including, but not limited to, enforcement action which could result in more air pollution controls and/or reduction of emissions at the facility and a future permitting action.

### **Comment #2:**

The comment was made that the boilers are very large emissions sources and that if the emissions from these boilers are controlled properly then the emissions for the entire plant are greatly reduced.

### **Ohio EPA Response:**

We agree. ASA Bloomingburg will be built utilizing best available technology (BAT) for air pollution control, including two regenerative thermal oxidizers/heat recovery boilers. The regenerative thermal oxidizers (RTOs) produce heat from the combined fuel sources of natural gas and the waste stream (pollutants from the distillation process and the DDGS dryers listed in the air permit). This heat is recovered and used to heat the water in the boilers to produce steam for facility operations. Ohio EPA believes this heat recovery is a much more efficient process in reducing the amount of emissions emitted from the plant than by operating stand-alone boilers and RTOs separately.

### **Comment #3:**

A commentor expressed concern over toxic gases, specifically acetaldehyde and

formaldehyde, coming from the distillation and fermentation processes.

**Ohio EPA Response:**

Air dispersion computer software modeling was conducted by the permittee and by Ohio EPA based on Ohio EPA's Air Toxics Policy, which can be viewed here: <http://www.epa.state.oh.us/dapc/engineer/eguides/guide69.pdf>. This policy was put in place to model air toxics—listed by the American Conference of Governmental Industrial Hygienists (ACGIH)—which are allowable emissions in the permit-to-install. The modeling that was done for these air toxics — including acetaldehyde and formaldehyde — determined that the highest concentration of these air toxics outside the fence line of facility was far below the maximum allowable ground level concentration (MAGLC). Since these concentrations were below MAGLC, Ohio EPA believes that these air toxics will not have an adverse effect on public health or the environment.

**Comment #4:**

A commentor noted that there are cleaner ethanol plants operating in other states and that these facilities use additional controls, for instance two scrubbers instead of one. It was also noted that these other plants have more efficient controls on their ethanol load-out to tanker trucks and tanker railcars.

**Ohio EPA Response:**

Ohio EPA believes that the controls listed in the issued final air PTI meet Ohio EPA's Best Available Technology (BAT) criteria. See the responses to similar comments listed below.

**Comment #5:**

A concern was expressed that the permit only requires the facility to test the emissions at each source of the plant only once.

**Ohio EPA Response:**

The draft air PTI requires initial emissions testing for numerous significant sources of air pollution at ASA Bloomingburg. ASA Bloomingburg will be required to obtain a permit-to-operate (PTO) which may require further periodic emissions testing. The need for periodic testing will be determined based on the results of the initial emissions testing, the compliance history and other factors in accordance with Ohio EPA, DAPC's Engineering Guide number 16

(<http://www.epa.state.oh.us/dapc/engineer/eguides/guide16.pdf>).

**Comment #6:**

A comment was made regarding an ethanol plant in Nebraska that was taken to court and made to “clean up” their plant. The question was asked about what was required of that plant and if ASA Bloomingburg will be held to those same requirements.

**Ohio EPA Response:**

See response to comment #1.

Ohio EPA believes that the issued final air PTI represents BAT and is reflective of requirements for similar facilities located in similar air quality areas where ASA Bloomingburg proposes to located and is therefore protective of public health and the environment.

**Comment #7:**

A number of commentors spoke out in support of this plant and wanted to ensure that skilled, union labor was used in its construction.

**Ohio EPA Response:**

Ohio EPA has not been granted authority to dictate who will build the ASA Bloomingburg LLC plant.

**Comment #8:**

A number of commentors said that they wanted to make sure that Ohio EPA and their local governments do what they need to do and enforce the regulations to keep the environment and the citizens safe.

**Ohio EPA Response:**

Ohio EPA will do everything that it is empowered to do under both state and federal laws and regulations to protect the citizens and environment of Ohio .

**Comment #9:**

A commentor expressed concern over the monitoring of the pollutants generated at this plant.

**Ohio EPA Response:**

The draft air PTI contains initial emissions testing on numerous sources and the subsequent PTO may require additional, periodic emission testing (see Ohio EPA Response to comment # 5 above). In addition, the permit requires extensive monitoring, record keeping and reporting to validate the amounts of pollutants allowed in the permit.

**Comment #10:**

A commentor wanted to know if the plant would be allowed to continue operations if the supporting control device for dust (particulates) was inoperative.

**Ohio EPA Response:**

The permittee is required to report the malfunction of any emissions units or any associated air pollution control system(s) to Ohio EPA. The permittee must also comply with all general and specific terms and conditions of the PTI and subsequent permits to operate. These terms and conditions specify the correct operation of each individual emissions unit and include the mandatory use of any associated control devices. Non-compliance with these terms and conditions is a violation of the air PTI and a violation of state and federal rules and regulations and may subject the facility owner/operators to various fines and penalties or other enforcement actions.

**Comment #11:**

A commentor referred to a pamphlet that he had received from Legal and Safety Employer Research (LASER) that stated that ASA Bloomingburg would emit 500 tons of pollution each year and wanted to know if this was the plant's proposed emissions or potential maximum emissions.

**Ohio EPA Response:**

That is not the correct amount of proposed emissions. According to the draft air PTI, the potential to emit (PTE\*) of each pollutant at ASA Bloomingburg LLC's facility is as follows:

- particulate emissions (PE) 68.65 tons per year (TPY)

- particulate matter less than 10 microns in diameter (PM<sub>10</sub>) 61.84 TPY
- volatile organic compounds (VOCs) 97.99 TPY
- nitrogen oxides (NO<sub>x</sub>) 91.95 TPY
- sulfur dioxide (SO<sub>2</sub>) 83.4 TPY
- carbon monoxide (CO) 92.98 TPY

This equals a total of 496.81 TPY. This PTE of 496.81 TPY is the maximum the facility is permitted to emit during any calendar year. The actual annual emissions from this facility can be considerably less than the permitted PTE.

\*PTE is based on 8,760 hours of operation per year at the facility's maximum hourly rate. The synthetic minor restrictions limit three of the facility's sources to less than 8,760 hours per year and/or less than the maximum annual rate.

**Comment #12:**

The Cargill AgHorizons grain elevator should be considered a "support facility" for the ASA Bloomingburg ethanol plant. Therefore, the potential emissions from the Cargill AgHorizons' operations should be included with the ASA Bloomingburg potential emissions when considering if the Prevention of Significant Deterioration (PSD; 40 CFR 52.21) and Title V permitting thresholds of 100 TPY of criteria pollutants have been triggered.

**Ohio EPA Response:**

In accordance with the synthetic minor air PTI for ASA Bloomingburg LLC, the potential to emit (PTE) of particulate emissions (PE) for the entire facility is 68.65 TPY. In accordance with the proposed Cargill AgHorizons' air PTI application, the PTE of PE for this facility is 26.98 TPY. Together, the PTE of PE for all sources is currently proposed to be 95.63 TPY which is under the 100 TPY threshold. Therefore, neither of these permits (ASA Bloomingburg LLC or Cargill AgHorizons) triggers PSD or Title V permitting.

**Comment #13:**

The claim of 100% capture efficiency in the four hammermills (particulates) and the fermentation scrubber (VOCs) is based on engineering estimates. This 100% capture is not required by the permit to be demonstrated. A decrease of 100% to 99% capture efficiency substantially increases the emissions.

**Ohio EPA Response:**

ASA Bloomingburg LLC has agreed to 100% capture for their hammermills because

the entire grain handling and milling process is enclosed and all of the emissions are routed to the baghouse. The fermentation process is entirely enclosed and the fumes are all routed to the scrubber. Any leaks from this process would be covered under P801 (OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV, for fugitive VOC emissions.

**Comment #14:**

Per Prevention of Significant Deterioration (PSD) requirements, fugitive emissions from the paved parking areas, unpaved roadways and parking areas, DDGS Cooling Drum, Truck Load Spout and Wet Cake have not been reported by the applicant and should be included in the PTE (potential to emit) calculations.

**Ohio EPA Response:**

All fugitive emissions have been accounted for. See Ohio EPA response to comments #11 and #12 above and #15 below.

**Comment #15:**

There are discrepancies in the air PTI application's calculation of the facility's PTE.

**Ohio EPA Response:**

Throughout the permitting process, any discrepancy or inconsistency discovered was brought to the facility's attention. A response was then provided which fixed the discrepancy in each case. The calculations and emissions data from the application may differ from the calculations and emissions data in the draft permit based on updated emissions data and other updated information.

**Comment #16:**

The draft air PTI fails to require the facility to use test Method 202 of 40 CFR 60 to measure condensable particulate emissions (PE) in combination with Method 5 of 40 CFR 60 to measure filterable particulate emissions.

**Ohio EPA Response:**

Ohio EPA has incorporated all appropriate test methods listed in U.S. EPA's 40 CFR 60 into the final issued air PTI.

**Comment #17:**

Nitrogen oxide (NOx) emissions are not established for the two 122-mmBtu/hr boilers even though the BAT determination for the boilers was identified at 0.04 lb NOx/mmBtu in the application. The draft permit only required a combined NOx emission rate of 20.5 lb/hr and 89.79 tons per year. Also, BAT for boilers is not the use of low-NOx burners (LNB) alone.

**Ohio EPA Response:**

The emissions from this process (20.5 lb/hr and 89.79 TPY of NOx) include the combustion of natural gas for the RTO, the control of emissions from the distillation process and the control of the emissions from the dryer systems. The 0.04 lb NOx/mmBtu value is for the combustion of natural gas alone and is not the only source included in this process and, therefore, cannot be individually determined or tested. Ohio EPA does not believe that it is appropriate to compare the two 122-mmBtu/hr boilers to similar boilers burning natural gas only.

In addition, best available technology (BAT) is defined as any combination of air pollution control technology, operating practices and operational restrictions. It is not established solely through implementation of a single emission limitation for a specific source type. BAT requirements and emission limitations are site-specific to account for variations in equipment and operation. Therefore, the emission limitations associated with BAT for a specific source type encompass a range of values. The air pollution control equipment, operating practices, operational restrictions and emission limitations required by the permit satisfy the BAT criteria.

In addition, Ohio EPA looked only at similar air quality areas within the United States. For example, Ohio EPA did not consider limitations in air permits that were issued to comply with non-attainment area regulations. Ohio EPA does not consider those air quality areas to be similar in air quality to the area where the ASA Bloomingburg LLC proposed facility is to be located in Ohio for purposes of evaluating BAT.

**Comment #18:**

The cooling tower is controlled using a drift eliminator with a drift loss of 0.005%, which does not constitute BAT. High efficiency drift eliminators achieving 0.0005% drift loss are routinely used in similar applications.

**Ohio EPA Response:**

The use of drift eliminators to achieve a drift loss of 0.005% is considered to be BAT

for cooling towers and is consistent with other recently permitted units in Ohio.

See also response to comment #17 above with respect to BAT.

**Comment #19:**

The draft PTI requires a control efficiency on the wet scrubber to be 98.5% for VOCs and single scrubber control is not BAT. Permits issued throughout the country have achieved 99.5%-99.9% control when routed through a thermal oxidizer then through a scrubber while other scrubbers have achieved 98.7% control or higher.

**Ohio EPA Response:**

Test data at other sites has shown individual results above the 98.5% VOC control. However, the permit limit is enforceable for continuous operation at the facility. Some margin of safety is necessary to allow a compliant stack test to be conducted. The control efficiency proposed in the permit is achievable over time, not just for the first stack test. Best available control technology (BACT) and BAT determinations in attainment areas that meet air quality standards around the United States, similar to Fayette County where ASA Bloomingburg will be installing their operations, have been 95% to 98% VOC control through the use of scrubbers or thermal oxidizers. Ohio EPA does not consider non-attainment area permits to be applicable to the ASA Bloomingburg permitting due to the proposed facility's location in an attainment area.

See also response to comment #17 above with respect to BAT.

**Comment #20:**

First, a single scrubber is not BAT for the distillation and drying process. Second, higher VOC control (98.5%-99.4%) has been achieved in other permits in the country. Stack tests in similar facilities have achieved 99.0% - 99.6% control efficiencies.

**Ohio EPA Response:**

See responses to comments #17 and #19 above with respect to BAT.

**Comment #21:**

The permit requires routing 100% of the emissions to a 98% efficient flare.

However, 100% is not a practical capture efficiency and should be 70%-90% per AP-42. Also, the efficiency of the flare should be 99% (per AP-42) and not 98%.

**Ohio EPA Response:**

The 100% capture efficiency will be achieved by running the flare fans prior to connecting the load-out vent lines and the trucks and railcars are fitted with threaded connections for vapor recovery from each vessel.

See response to comment #17 above with respect to BAT.

**Comment #22:**

The draft PTI does not represent the maximum potential to emit for paved roadways and parking areas. The potential emissions need to be recalculated using silt loading factors (ranging from 7.4 to 292 g/m<sup>2</sup>) on industrial paved roadways and not silt loading factors typical for urban roads (0.4 to 0.6 g/m<sup>2</sup>).

**Ohio EPA Response:**

ASA Bloomingburg submitted several studies to Ohio EPA which document the proposed 0.4 g/m<sup>2</sup> silt loading factor. Ohio EPA believes that the proposed 0.4 g/m<sup>2</sup> silt loading factor is appropriate for the proposed facility.

In addition, ASA Bloomingburg plans to implement a fugitive dust control plan in order to decrease the particulate matter emissions via sweeping and vacuuming of the paved roadways. This will result in reducing the amount of fugitive particulate emissions emitted from the paved roadways below those amounts of fugitive particulate emissions generated based upon the proposed 0.4 g/m<sup>2</sup> silt loading factor.

**Comment #23:**

What are the health risks from inhaling the allowable emissions (formaldehyde for instance) 24/7?

**Ohio EPA Response:**

The toxic air pollutants proposed to be emitted by the facility have been evaluated in accordance with Ohio EPA's Air Toxics Policy which is based upon operating the facility 24 hours a day and seven days a week. Based on these results, the proposed emissions are not expected to cause adverse health affects.

See also response to comment #3 above.

**Comment #24:**

Internet research shows that many problems have developed that called for EPA action. Does our air pollution permit take those situations into consideration as a way to prevent problems before the plant is up?

**Ohio EPA Response:**

See response to comments #1 and #6.

**Comment #25:**

What has been done to address the odor issue?

**Ohio EPA Response:**

ASA Bloomingburg will be utilizing best available technology for air pollution control including two regenerative thermal oxidizers to control the distillers dried grains with solubles (DDGS) dryers emissions. Use of BAT will minimize odors associated with the facility. ASA Bloomingburg must also comply with OAC rule 3745-15-07 which prohibits air pollution nuisances.

**Comment #26:**

Comments about the dangers from explosions and ethanol spills were received.

**Ohio EPA Response:**

Dangers from explosions and ethanol spills are not considered as part of the criteria used to determine whether or not Ohio EPA would issue a final air PTI.

However, Ohio EPA does have regulations and/or programs other than the air PTI regulations to deal with those types of situations if they occur. Please see our Web site for more information on spills: <http://www.epa.state.oh.us/>.

**Comment #27:**

Ohio EPA received comments in support of the ethanol plant. Commentors

noted confidence in Ohio EPA and the government's decisions and actions regarding the control and regulation of ethanol plants.

**Ohio EPA Response:**

No response is required.

**Comment #28:**

The meeting held 4-18-06 had a lack of information about CO<sub>2</sub> discharges. In the zoning meeting (date unknown), the company [ASA Bloomingburg] stated that they intended to sell their CO<sub>2</sub>. Now we hear that they intend to release the CO<sub>2</sub> into the atmosphere. What is the reality?

**Ohio EPA Response:**

ASA Bloomingburg LLC intends to partner with a CO<sub>2</sub> (carbon dioxide) production company shortly after construction begins. Carbon dioxide is not a regulated pollutant, and as a result, air permits do not contain emissions of carbon dioxide.

**Comment #29:**

There should be a meeting on the water issues as these could have more adverse affects than the air releases.

**Ohio EPA Response:**

The hearing and comment period for this air PTI were held to receive comments on the air PTI issued to ASA Bloomingburg. ASA Bloomingburg is working with Ohio EPA's Division of Surface Water to comply with the applicable requirements regarding wastewater discharges. The company will be required to comply with all applicable wastewater regulations and to obtain all necessary permit(s).

Ohio EPA will be holding a public hearing concerning the water issues in the near future. Please contact the Agency's Public Interest Center for more information on this hearing at (614) 644-2160.